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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

JOHNSON, STEPHEN

ART UNIT PAPER NUMBER

3641

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,897

Applicant(s)

WADDELL ET AL.

Examiner

Stephen M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) 3, 4 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 7-9, 11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-9, 11 and 12 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

[Handwritten signature]

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1. Applicant's election with traverse of species A (directed to an assembly for attenuating shock waves that includes a shock attenuating material that is perlite) in the reply filed on 1/25/2005 is acknowledged.

Claims 3-4 and 6 are withdrawn from consideration as being directed to non-elected species. Claims 1-2, 5, 7-9, and 11-12 read on the elected species and an action on these claims follows.

2. Claims 1-2, 5, 7-9, and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Symons.

Symons discloses an assembly for attenuating shock waves comprising:

- a) 2 flexible sheets; see figs. 4, 7, or 9
- b) a plurality of seams; see figs. 4, 7, or 9
- c) a plurality of cells or recess; see figs. 6 or 8
- d) a shock wave attenuating material (perlite); and col. 5, lines 12-20
- e) flexible sheets that are water-impermeable. col. 4, lines 54-68

3. Applicant's arguments are addressed as follows. (1) It is argued that Symons discloses a panel used as a building material constructed of materials having the necessary stiffness and impact resistance. While this is factually accurate, it is an incomplete analysis of the Symons reference. The materials of Symons (e.g. kraft paper with an impregnated polyester resin surrounding a perlite material) (see col. 3, line 43; col. 4, lines 54-69; col. 5, lines 12-14 and 64-65) are such that Symons must inherently be flexible to some degree. It is not being argued that the degree of flexibility is the same as applicant's invention but rather that some degree of flexibility must inherently be present in Symons as a consequence of the nature of the materials

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disclosed in Symons. (2) It is argued that the thermosetting resin of Symons is a hard resin that is rigid and not flexible. In response, Symons specifically states that either a phenolic resin or a polyester resin may be used as a thermosetting resin (see col. 4, lines 10-37). Polyester resins are known to have inherently flexible characteristics (see The Condensed Chemical Dictionary (pp. 706) and Material Handbook (pp. 642-644)). In particular note the passages “The function of these acids is to reduce the amount of unsaturation in the final resin, **making it tougher and more flexible**” (pp. 706) and “Other of the resins are used with fillers to produce molding powders that cure at low pressure of 500 to 900 psi with fast operating cycles. Some of the polyesters **have rubber-like properties, and are Polyester rubber**” (pp. 643). Clearly polyester resins include flexible materials. Further, Symons specifically states that the polymerization of the cellular core is selected to give the core the required degree of rigidity (see col. 4, lines 66-68). This statement infers that the cellular core is rigid to some degree and consequently must be flexible to some degree.

It is further argued that col. 6, lines 41-46, disclose a corrugated cardboard impregnated with a liquid composition. In response, note that this portion of Symons lists only one example of the materials that may be used in Symons. Other examples are kraft paper (col. 6, lines 66-67) and polyester resins (col. 3, line 43) surrounding a perlite core (col. 5, line 14). First, it is interesting to note just how similar the materials of Symons are to applicant’s disclosed materials of flexible sheets of plastic resin (see claim 12) and a filler material of perlite (see claim 2). Certainly, a polyester resin is considered to be a plastic resin. Secondly, it is interesting to note that the intended purpose of Symons is essentially the same as applicant’s intended function of

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acoustic absorption or sound absorption as well as good fire resistance (see col. 7, lines 39-42 of Symons).

It is further argued that “thermosetting resin is described as a material that hardens when heated under pressure, but from then on cannot be molded or melted without ruining its original properties”. In response, this argument appears to be directed more to the way in which the thermosetting resin is manufactured and not to the properties of the material when finally formed. Also note col. 4, lines 63-68, of Symons wherein “the thermosetting resin having been polymerized, to give the cellular core **the required degree of rigidity**”. Such a statement implies that rigidity can be adjusted by varying the process of impregnation with a thermosetting resin. As such, if the degree of rigidity can be adjusted, it follows that the degree of flexibility can be adjusted as well. For all of the above reasons, the claim limitation directed to “flexible sheets” is clearly met.

Finally, it should be noted that applicant has added the term “flexible” to the title of the claim and not to either the preamble of the claim or the claim body. As such, the term “flexible assembly” has no patentable weight. The only other use of the term “flexible” is to describe the sheets as flexible and this issue was addressed in the preceding Office action.

4. Claims 1-2, 5, 7-9, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfisterhammer in view of Symons.

Pfistershammer discloses an assembly for attenuating shock waves comprising:

- | | |
|------------------------------------|--------------|
| a) 2 flexible sheets; | 19, 19', 19" |
| b) a plurality of seems; | see fig. 10 |
| c) a plurality of cells or recess; | contains 22 |

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- d) a shock wave attenuating material; 22
- e) a covering of water impermeable material; and 22
- f) flexible sheets that are water-impermeable. col. 5, lines 65-69

Pfisterhammer applies as recited above. However, undisclosed is a shock wave attenuating material that has the flow properties of a liquid. Symons teaches a shock wave attenuating material that has the flow properties of a liquid (col. 5, lines 12-20). Applicant is substituting one attenuating material for another in an analogous art setting as explicitly encouraged by both the primary reference (see Pfisterhammer, col. 5, line 70-col. 6, line 6) and the secondary reference (see Symons, col. 5, lines 12-20). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Symons to the Pfisterhammer attenuating assembly and have an attenuating assembly that has different material type of core attenuating material.

5. Applicant's arguments with respect to Pfisterhammer in view of Symons are addressed as follows. (1) It is argued that Symons discloses an inorganic insulating material and that there is no disclosure or suggestion that these materials are of a particle size to have the flow properties of a fluid. In response, please see the attached definition of the term "perlite". Perlite is defined by Webster as "a volcanic glass in which concentric fractures impart a distinctive structure resembling masses of small spheroids, used as a plant growth medium". As such the perlite as defined by Webster seems to be almost identical to applicant's disclosed perlite "... granular or other solid particles which have the necessary flow characteristics. The preferred pressure wave attenuating material in Perlite" (see para. [0040]). It is further argued that the particle size of the perlite is not the same as the particle size of applicant's disclosure and therefore cannot meet the

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appropriate flow characteristics. In response, Webster defines “perlite” as having small spheroids as used in plant growth medium. This appears to be of an appropriate size to meet the claim limitation directed to “flow properties of a liquid”. Further, if the size is so critical to the functioning of applicant’s device and since no particular size has been given in the written specification, perhaps the issue of enablement and written description should be addressed on the grounds of 35 USC 112 (first) paragraph. (2) It is further argued that the filler must be free to flow within the cells and that the cells of Pfisterhammer and Symons are completely filled. In response, please note that applicant has claimed “a shock attenuating material having the flow properties of a liquid”. Note that this claim limitation is directed to a property of the shock attenuating material and not to the containing structure. Further, note that since the perlite material is composed of small spheroids, there is inherently space for movement between adjacent spheres. This is one of the features that gives the material its characteristic inherent flow properties. If the small spheres were large squares, they would clearly not have the flow properties of a liquid.

With regard to the argument directed to the structural materials of Pfisterhammer being deformable under stress and this not being the same as being flexible. Note that Pfisterhammer suggests many possible different materials for containment sheets 19 (see col. 5, lines 65-69). One of these suggested materials is polyamide or Nylon and such materials are well known even by one of ordinary skill in this art to have a flexible nature. With regard to the argument that the Pfisterhammer structural arrangement could not be wrapped around any shape of structure. This is factually accurate. The examiner is only stating that the Pfisterhammer structure and its

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associated containment sheets must be inherently flexible to some degree on the basis of their disclose materials and their inherent nature.

6. Claims 1, 5, 7-9, and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Abbott.

Abbott discloses an assembly for attenuating shock waves comprising:

- a) 2 flexible sheets; see figs. 9, 10
- b) a plurality of seems; col. 6, lines 60-62
- c) a plurality of cells or recess; 65, 66, 67
- d) a shock wave attenuating flowable material; and 68, col. 6, lines 47-49
- e) flexible sheets that are water-impermeable. col. 6, lines 60-62

7. Applicant's arguments are addressed as follows. It is argued that the pockets of Abbott contain a petroleum absorbent material to prevent petroleum leakage and this statement is accurate. To state that is its sole purpose would not be accurate in view of the fact that Abbott discusses the use of the flexible material both to protect the covered structure (see col. 7, lines 15-17) and as a flexible ballistic plastic pad (see claim 8). Further, since ever item in the claim language is met by Abbott, the argument directed to intended usage could not be convincing even if the sole usage intended usage of Abbott was associated with oil spill usage.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott in view of Symons.

Abbott applies as recited above. However, undisclosed is a shock wave attenuating

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material that is perlite. Symons teaches a shock wave attenuating material that is perlite (col. 5, lines 12-20). Applicant is substituting one attenuating material for another in an analogous art setting as explicitly encouraged by both the primary reference (see Abbott, col. 6, lines 47-49) and the secondary reference (see Symons, col. 5, lines 12-20). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Symons to the Abbott attenuating assembly and have an attenuating assembly that has different material type of core attenuating material.

9. Claims 1, 5, 7-8, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Poisson et al..

Poisson et al. disclose an assembly for attenuating shock waves comprising:

- | | |
|--|---------------------|
| a) 2 flexible sheets; | 2, 2a |
| b) a plurality of seems; | col. 3, lines 65-70 |
| c) a plurality of cells or recess; and | see fig. 2 |
| d) a shock wave attenuating material. | col. 4, lines 64-66 |

10. Claims 1, 5, 7-8, and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Winston.

Winston discloses an assembly for attenuating shock waves comprising:

- | | |
|--|-------------------|
| a) 2 flexible sheets; | 26, 30 |
| b) a plurality of seems; | 42 |
| c) a plurality of cells or recess; and | see figs. 11, 12 |
| d) a shock wave attenuating material. | 44; col. 3, 11-14 |

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11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winston in view of Miguel et al.

Winston applies as previously recited. However, undisclosed is an aggregate flowable material that is perlite. Miguel teaches an aggregate flowable material that is perlite (col. 3, lines 45-67 and claim 2). Applicant is substituting one flowable aggregate material for another as explicitly encouraged by both the primary and secondary references (see col. 3, lines 11-13 of Winston and col. 3, lines 45-67 of Miguel et al.). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Miguel et al. to the Winston device and have a device with a different type of aggregate material.

12. Applicant's arguments filed on 8/10/2005 have been fully considered but they are not persuasive. These arguments have been addressed in the preceding paragraphs of this Office action.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Included are dictionary definitions of the term "perlite".

14. In response to the request for a drafted allowable claim, the following claim is suggested.

13. (New) A flexible assembly comprising in combination:

- a) a first strip of a water-impermeable polyamide resin material;
- b) a second strip of a water-impermeable polyamide resin material, said second strip having attached pockets spaced from each other along the second strip;
- c) the first strip attached to the second strip via a plurality of seams; each of the seams surrounding each of the spaced pockets in such a way as to make the assembly flexible;

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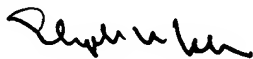
d) each of the pockets filled with a shock wave attenuating material having the flow properties of a liquid; wherein the shock wave attenuating material is perlite.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Johnson whose telephone number is 571-272-6877.

The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The Central FAX phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 800-786-9199.



STEPHEN M. JOHNSON
PRIMARY EXAMINER

Stephen M. Johnson
Primary Examiner
Art Unit 3641

SMJ
August 26, 2005